

LISTING OF CLAIMS:

1. (Currently amended) A ceramic catalyst body comprising a ceramic carrier capable of supporting a catalyst component directly on the surface of a ceramic substrate having a crystal lattice and a catalyst supported on the ceramic carrier, wherein catalyst particles are provided with a layer containing an anti-evaporation metal formed at least in part of an outer surface thereof, wherein

one or more of the elements that constitute the ceramic substrate is substituted with an element other than a constituent element, and the ceramic carrier is capable of supporting the catalyst metal directly on the substituting element.

2. (Original) The ceramic catalyst body according to claim 1, wherein the layer containing the anti-evaporation metal covers at least 10% of the outer surface of the catalyst metal particles.

3. (Original) The ceramic catalyst body according to claim 1, wherein the layer containing the anti-evaporation metal covers at least 50% of the outer surface of the catalyst metal particles.

4. (Original) The ceramic catalyst body according to claim 1, wherein the anti-evaporation metal is supported on the outer surface of the catalyst metal particles in the form of a metal, an oxide of the metal or an alloy.

5. (Original) The ceramic catalyst body according to claim 1, wherein the catalyst metal is a noble metal and the anti-evaporation metal is a high-melting point metal of which oxide has a melting point of 1,100°C or higher.

6. (Original) The ceramic catalyst body according to claim 1, wherein the anti-evaporation metal has catalytic activity.

7. (Original) The ceramic catalyst body according to claim 1, wherein at least one kind selected from the group consisting of Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Rh, Ta, W and Ir is used as the anti-evaporation metal.

8. (Canceled).

9. (Previously presented) The ceramic catalyst body according to claim 1, wherein the catalyst metal is supported on the substituting element by chemical bonding.

10. (Previously presented) The ceramic catalyst body according to claim 1, wherein the substituting element is one or more element having a d or an f orbit in the election orbits thereof.

11. (Currently amended) A ceramic catalyst body comprising a ceramic carrier capable of supporting a catalyst component directly on the surface of a ceramic substrate having a crystal lattice and a catalyst supported on the ceramic carrier, wherein catalyst particles are provided with a layer containing an anti-evaporation metal formed at least in part of an outer surface thereof, wherein

the ceramic carrier has a multitude of pores capable of directly supporting the catalyst on the surface of the ceramic substrate so that the catalyst metal can be supported directly in the pores.

12. (Original) The ceramic catalyst body according to claim 11, wherein the pores comprise at least one kind selected from the group consisting of defects in the ceramic crystal lattice, microscopic cracks in the ceramic surface and defects in the elements which constitute the ceramic.

13. (Original) The ceramic catalyst body according to claim 12, wherein the microscopic cracks measure 100 nm or less in width.

14. (Original) The ceramic catalyst body according to claim 12, wherein the pores have diameter or width 1,000 times the diameter of the catalyst ion to be supported therein, or smaller, and the density of pores is $1 \times 10^{11} / L$ or higher.

15. (Previously presented) The ceramic catalyst body according to claim 12, wherein the ceramic substrate includes cordierite as the main component, and the pores comprise defects formed by substituting a part of the constituent elements of the cordierite with metal element having different value of valence.

16. (Original) The ceramic catalyst body according to claim 15, wherein the defects comprise at least one of an oxygen defect or a lattice defect, and the density of cordierite crystal containing at least one defect in a unit crystal lattice of cordierite is set to $4 \times 10^{-6} \%$ or higher.

Claims 17 – 18 (Cancelled)

19. (Previously presented) The ceramic catalyst body according to claim 23, wherein the trap layer is formed by supporting a trapping component which adsorbs the catalyst poisoning component on a carrier coated with porous ceramic on the surface thereof.

20. (Currently amended) A ceramic catalyst body comprising a ceramic carrier capable of supporting a catalyst directly on the surface of a ceramic substrate having a crystal lattice and a catalyst component supported on the ceramic carrier, wherein a trapping component which adsorbs a catalyst poisoning component included in the gas to be purified is supported at least at the end face of the carrier in the upstream of the flow of gas to be purified, thereby providing a trap layer that traps the catalyst poisoning component.

21. (Previously presented) The ceramic catalyst body according to claim 23, wherein the catalyst component includes a main catalyst component made of a noble metal and a promoter component which receives the catalyst poisoning, while the promoter component is used as the trapping component which adsorbs the catalyst poisoning component.

22. (Currently amended) A ceramic catalyst body comprising a ceramic carrier capable of supporting a catalyst directly on the surface of a ceramic substrate having a crystal lattice and a catalyst component supported on the ceramic carrier, wherein a catalyst which decomposes a compound generated through reaction with a catalyst poisoning component included in gas to be purified is provided near the catalyst that receives catalyst poisoning.

23. (Currently amended) A ceramic catalyst body comprising a ceramic carrier capable of supporting a catalyst directly on the surface of a ceramic substrate having a crystal lattice and a catalyst component supported on the ceramic carrier, wherein a trap layer is provided at a position near an end face of the ceramic carrier in an upstream flow direction of gas to be purified so as to trap a catalyst poisoning component included in the gas to be purified, wherein one or more of the elements which constitute the substrate ceramic of the ceramic carrier is substituted with an element other than the constituent element, so that the carrier is capable of supporting the catalyst component directly on the substituting element.

24. (Previously presented) The ceramic catalyst body according to claim 23, wherein the catalyst component is supported on the substituting element by chemical bonding.

25. (Previously presented) The ceramic catalyst body according to claim 23, wherein the substituting element is one or more element having d or f orbit in the electron orbits thereof.

26. (Currently amended) A ceramic catalyst body comprising a ceramic carrier capable of supporting a catalyst directly on the surface of a ceramic substrate having a crystal lattice and a catalyst component supported on the ceramic carrier, wherein a trap layer is provided at a position near an end face of the ceramic carrier in an upstream flow direction of gas to be purified so as to trap a catalyst poisoning component included in the gas to be purified, wherein the ceramic carrier has a multitude of pores which are capable of supporting the catalyst directly on the surface of the ceramic substrate so that the catalyst component can be supported directly in the pores.

27. (Previously presented) The ceramic catalyst body according to claim 26, wherein the pores comprise at least one kind selected from the group consisting of defects in the ceramic crystal lattice, microscopic cracks in the ceramic surface and defects in the elements which constitute the ceramic.

28. (Original) The ceramic catalyst body according to claim 27, wherein the microscopic cracks measure 100 nm or less in width.

29. (Original) The ceramic catalyst body according to claim 27, wherein the pores have diameter or width 1,000 times the diameter of the catalyst ion to be supported therein, or smaller, and the density of pores is 1×10^{11} / L or higher.

30. (Original) The ceramic catalyst body according to claim 27, wherein the substrate ceramic includes cordierite as the main component, and the pores comprise defects formed by substituting a part of the constituent elements of the cordierite with metal element having different value of valence.

31. (Original) The ceramic catalyst body according to claim 30, wherein the defects comprise at least one of an oxygen defect or a lattice defect, and the density of cordierite crystal containing at least one defect in a unit crystal lattice of cordierite is set to 4×10^{-6} % or higher.

32. (Previously presented) The ceramic catalyst body according to claim 23, wherein the ceramic carrier may have a shape of at least one kind selected from a group of honeycomb, pellet, powder foam body, fiber or hollow fiber.

Claims 33 – 41 (Cancelled)

42. (Previously presented) The ceramic catalyst body according to claim 11, wherein the layer containing the anti-evaporation metal covers at least 10% of the outer surface of the catalyst metal particles.

43. (Previously presented) The ceramic catalyst body according to claim 11, wherein the layer containing the anti-evaporation metal covers at least 50% of the outer surface of the catalyst metal particles.

44. (Previously presented) The ceramic catalyst body according to claim 11, wherein the anti-evaporation metal is supported on the outer surface of the catalyst metal particles in the form of a metal, an oxide of the metal or an alloy.

45. (Previously presented) The ceramic catalyst body according to claim 11, wherein the catalyst metal is a noble metal and the anti-evaporation metal is a high-melting point metal of which oxide has a melting point of 1,100°C or higher.

46. (Previously presented) The ceramic catalyst body according to claim 11, wherein the anti-evaporation metal has catalytic activity.

47. (Previously presented) The ceramic catalyst body according to claim 11, wherein at least one kind selected from the group consisting of Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Rh, Ta, W and Ir is used as the anti-evaporation metal.

48. (Previously presented) The ceramic catalyst body according to claim 26, wherein the trap layer is formed by supporting a trapping component which adsorbs the catalyst poisoning component on a carrier coated with porous ceramic on the surface thereof.

49. (Previously presented) The ceramic catalyst body according to claim 26, wherein the catalyst component includes a main catalyst component made of a noble metal and a promoter component which receives the catalyst poisoning, while the promoter component is used as the trapping component which adsorbs the catalyst poisoning component.